ABSTRACT

Power devices in which a low on-resistance can be obtained while maintaining a high breakdown voltage and a method for manufacturing the power devices are described. The power device includes a semiconductor substrate having a first conductivity type, a burying layer having a high concentration of a second conductivity type arranged deep in the semiconductor substrate, a well having a low concentration of a second conductivity type formed on the burying layer of the semiconductor substrate, a body region having a first conductivity type formed in a predetermined portion in the well having a low concentration of a second conductivity type, first and second channel stop regions having a low concentration of a second conductivity type, the first and second channel stop regions are formed in a predetermined portion of the body region and on both edges of the body region having a first conductivity type, a gate electrode including a gate insulating layer, formed on a space between the first and second channel stop regions, source and drain regions having a high concentration of a second conductivity type formed in the first and second channel stop regions on both sides of the gate electrode, and a body contact region formed in the source region. Only the body region having a first conductivity type exists between the first and second channel stop regions, and a channel is formed between the first and second channel stop regions.